IBM

IBM 3410 magnetic tape subsystem

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Storage details

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- Announced October 7, 1971 and withdrawn October 20, 1987

The IBM 3410 magnetic tape subsystem was used not only with the IBM System/360 and System/370 mainframes but also extended tape storage capability to the small IBM System/3 for the first time. The 3410 subsystem had a new, desk-high design with tape reels mounted horizontally instead of vertically, as in most tape drives. A transparent sliding cover similar to that of a rolltop desk provided easy access.

Control circuitry for as many as six tape drives was built into one of the tape units, eliminating the need for a separate control unit and saving floor space. Servicing was performed from the front, so that drives could be placed as close to a wall as six inches.

The 3410 could read or record data on magnetic tape at 20,000, 40,000 or 80,000 bytes a second. Major features included:

- Advanced monolithic circuit technology in both the control unit and tape drives.
- Dual density, the ability to use tapes recorded at different densities on the same drive.
- An optical tachometer that made possible precise control of the speed of the capstan and associated tape motion.
- Microdiagnostic programs in the control unit that simplified and sped servicing.
- Simplified tape threading and a push/pull, quick release mounting hub, permitting fast loading and unloading of standard tape reels.

The addition of magnetic tape storage for System/3 Model 10 enabled a user to interchange data conveniently between Model 10 installations by mailing or delivering tape reels. In the same way, magnetic tape could be used to interchange data between System/3 and any System/370 or System/360 equipped with IBM 3400- or 2400-series tape drives.

At announcement, monthly rental for the 3410 ranged from $240 to $385, depending on the data rate and recording technique selected. Purchase prices ranged from $10,200 to $16,400.

Initial deliveries of the IBM 3410 were scheduled for the last quarter of 1972. The subsystem was manufactured at IBM facilities in Boulder, Colorado, where it was developed, and in Greenock, Scotland.

	Model 1	Model 2	Model 3
Date rates (bytes per second) at 1,600 bits per inch (nine-track)	20,000	40,000	80,000
at 800 bits per inch (nine-track)	—	20,000	40,000
Tape speed (inches per second)	12.5	25	50
Rewind time (seconds per 2,400-foot reel)	180	180	120
Read/write acess time (milliseconds)	15	12	6
Max. number of tape drives per subsystem	4	6*	6*

* maximum of four drives when attached to System/3.